

Appl. No. 10/626,136
Amdt. dated January 5, 2005
Reply to Office action of October 6, 2004

Amendments to the Specification:

Please replace paragraph no. [0004] with the following rewritten paragraph:

[0004] Pull top cans are often used for items such as cat food, dog food, tuna, canned fruit, pudding, and numerous single serving products. As is known, the pull top can includes a pull tab on the can lid. ~~lid, and the~~ The pull tab enables the can lid to be pried open and lifted off the can, providing access to the contents of the can without the use of a can opener. However, it is often difficult to raise the pull tab off the surface of the lid. Additionally, once the pull tab has been raised to a position where the seal of the can has been broken, it can be difficult to remove the lid from the can. The difficulty in opening such cans is increased for those with long nails, nails or with disabilities, such as arthritis, or otherwise simply lack the strength or coordination to open a pull tab type can.

Please replace paragraph no. [0008] with the following rewritten paragraph:

[0008] In the first variation, the body includes a retainer which extends over the opening into the finishing notch. The retainer can comprise a channel which extends from the finishing notch to the second port or a lip which extends over the retaining notch. If a channel is provided, the channel can be either straight or curved. The channel, in combination with the retaining notch, defines a generally J-shaped retainer. Additionally, the retainer can comprise a movable member lever having an end which closes the opening to the finishing notch. The moveable

member can comprise, for example, a pivotable member. The pivotable member can be a lever positioned on top of the body.

Please replace paragraph no. [0026] with the following rewritten paragraph:

[0026] Referring initially to FIG. 2, a typical pull top-type can C has side walls SW and a lid L. Typically there is a rim extending above the lid defined by the side walls. To enable the can to be opened, and the lid to be removed, without the use of a typical kitchen can opener, the lid is provided with a pull tab T. The pull tab T extends generally radially inwardly from a point near the edge of the lid. The pull tab has a first end T1 that is near the edge of the lid and a second end T2 that is closer to the center of the lid. The pull tab T is secured to the lid by a rivet R near the pull tab first end T1, but spaced radially inwardly slightly from the pull tab first end. A hole H forms a ring at the second end of the tab to allow the tab to be grasped for opening of the can. As is known, to open the can C, the pull tab T is lifted up at its second end until the pull tab first end T1 breaks the seal on the lid. Effectively, by lifting the second end T2, the first end T1 is forced down into the can, and after a predetermined point amount of lifting (based on the dimensions of the pull tab and the position of the rivet), separates the tab first end pushes down on the lid, separating the lid from the can wall where the tab is connected to the can lid to break the seal of the can. When the seal is open (typically when the pull tab forms an angle with the lid of between 45° and 90°), the pull tab is pulled

rearwardly or radially (i.e., away from the point of rivet). The lid will then separate from the can, and the user will have access to the contents of the can. It is often difficult to lift up the tab in the first instance, and it is also often difficult to perform the second step to complete opening of the can. The difficulty is increased for example, for someone with long finger nails, or who is arthritic, or for someone who otherwise lacks the strength or coordination necessary to lift and pull the tab. Additionally, sometimes the lid can "spring" causing a mess in the area where the can is opened. As discussed below, the can opener 10 of the present invention facilitates opening of cans.

Please replace paragraph no. [0027] with the following rewritten paragraph:

[0027] A first illustrative embodiment of the opener 10 is shown in FIG. 1. The opener 10 includes a handle 12 and a body 14 at the forward end of the handle. The body 14 includes a front 16, a bottom edge 18, and a back edge 20. The bottom edge 18 and back edge 20 are curved. In fact, the bottom edge 18 curves around to join with a front edge 22. The edges 18, 20, and 22 transition smoothly from the edge 22 to the edge 18 to the edge 20 and define a generally U-shaped heel 23 for the body. The curvature defined by the edges 18, 20, and 22 is a French curve – that is, the radius of the curve changes along the length of the curve. Therefore, as can be seen, the radius of the curve along the front edge 22 is greater than the radius of the curve along the bottom edge 18 and back edge

20. For example Example, the curvature along the back and bottom edges can have a radius R1 of about 1"-2"; and the curvature of the front edge 22 can have a radius R2 at the upper edge of the front surface 22 of about 3"-6". The back edge 20, as seen, curves inwardly just below the handle, to define a concave portion 24 of the back edge. Further, the opener 10 has a front-to-back width W of about 2½" to about 2¾" These dimensions can be changed as desired to enable the opener to be used with cans of different sizes.

Please replace paragraph no. [0030] with the following rewritten paragraph:

[0030] A lip 36 extends diagonally upwardly and forwardly from the top of the edge 34. The top surface of the lip 36 is approximately level with, or slightly below, the top edge 38 of body 14. A second port 40 is formed between the lip 36 and the forward end of the body top edge 38, and a channel 42 extends from the port 40 to the finishing notch 28. The channel 42 is shown to be straight and is defined in part by the top surface of the lip 36. The channel 42 slopes downwardly and inwardly, defining an angle of about 45° to about 55° with the body vertical axis VA. The notch 28 curves downwardly and slightly forwardly of the end of the channel 42. The channel is formed such that there is a distance "b" between the rear tip of the lip 36 and the base of the lip 36. This distance "b", like the distance "a", must be less than the diameter of the pull tab hole so that the tab hole can fit over the lip 36 and be received in the notch 28. As with the distance

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"a", the distance "b" preferably is about 7/16" so that the opener will be able to accommodate most size tabs.

Please replace paragraph no. [0031] with the following rewritten paragraph:

[0031] The operation of the opener is shown in FIGS. 2, 3A and 3B. Initially, the anvil tip 35 is urged under the end T2 of the tab T and through the tab hole H until the end edge of the tab is received in the notch 26. When this is done, the handle 12 will be at a substantial angle with respect to the can lid L, as seen in FIG. 2. With the bottom surface 18 resting on the can lid, the handle 10 is pivoted downwardly to pivot the opener body 14 and raise the notch 26. The pivoting of the body 14 relative to the can lid L will cause the opener to raise the end of the pull tab T. The body 14 is rotated until the pull tab T is lifted to a position in which the seal between the can lid L and the can wall W is broken. The pull tab breaks the seal of the can generally when the pull tab T is lifted to an angle of between 45° and 90° relative to the can lid L.

Please replace paragraph no. [0034] with the following rewritten paragraph:

[0034] A second embodiment of the opener 50 is shown in FIG. 4. The opener 50 is generally similar to the opener 10. It differs only in the configuration of the finishing notch, the second port, and the retainer. The second port 52 opens generally upwardly. A channel 54 extends from the port 52 to the finishing notch 55 and continues upwardly to a retaining notch 56. The channel 54 is curved

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(rather than straight) and curves downwardly and forwardly into the finishing notch 55 56 which engages the pull tab during opening of the lid. The forward edge 58 of the opener leads to a lip 59 which curves around to generally downwardly extending to point 60. The point 60, in conjunction with the bottom edge of the curved channel 54, defines an opening 62 into the finishing notch 55 56. The opening 62 is shorter than the notch. Hence, the finishing notch 55 56 has a height greater than the height of the opening 62. The curved lip 59, which extends over the finishing notch 55 56, forms the retainer retaining notch 56 for the opener. Operation of the opener 50 is substantially identical to operation of the opener 10.

Please replace paragraph no. [0036] with the following rewritten paragraph:

[0036] The opener 80 of FIG. 6 shows a further variation of the finishing notch and second port. The opener 80 includes a lip 82 which curves similarly to the lip 59 of the opener 50 (FIG. 4) to form a channel 84, and the second or finishing notch 85 and the retaining notch 86. However, like the opener 70, the opener 80 also includes a forwardly extending upper lip 88, such that the port 90 is a more forwardly opening port (as opposed to a more upwardly opening port). The upper lip 88 gives the channel 84 a more spiral appearance. In the opener 80, the curved channel 84 and the lip 82 and the upper lip 88, in combination, form the

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~~retainer retaining notch 86~~ which holds the lid on the opener after the lid has been removed from the can.

Please replace paragraph no. [0037] with the following rewritten paragraph:

[0037] The opener 90 in FIG. 7 is somewhat similar to the opener 80 (FIG. 6). The opener 90 includes a curved surface 92 which extends upwardly from the starting notch. A port 94 is formed above the surface 92 in the forward edge of the opener body front. The port 94 opens into a channel 96 which has an initial straight section 96a and a curved section 96b which leads to the finishing notch 97. ~~98, which~~ The channel 96 then extends generally diagonally upwardly to form a retaining notch 98. The channel section 96a is generally flat and intersects with the surface 92 at an acute angle, preferably at a point 99. The channel 96 and notches 97 and 98 are defined or formed in part by a sloped flat surface 100 which extends inwardly from the point 99 and a finger 102 which extends downwardly from the end of the surface 100. As with the opener 10, the surface 100 forms an angle of between about 55° and about 65° with the vertical axis VA of the opener body. The finger 102 has a curved edge 102a which forms a surface of the channel 96 and an edge 102b which forms a surface of the notches 97 and 98. In this embodiment, the finger 102 and the extended spiral channel 96 form the retainer.

Please replace paragraph no. [0040] with the following rewritten paragraph:

[0040] The opener 130 (FIG. 10) is a variation of the opener 110. The opener 130 also includes a single port 132 which opens into the starting notch 134. A channel 136 extends upwardly from the notch 134. However, the opener 130 has only one finishing notch 138 which extends forwardly and downwardly from the top of the channel 136 to define a hook or barb 140. As seen, the channel 136 bends forwardly near its top as at 139 so that the notch 138 can extend downwardly from the top of the notch to be generally parallel to the main branch of the channel 136. The opener 130 also includes a rebound or retaining slot 142 which extends rearwardly from the channel 136. The notch 138 and the rebound/retaining slot 142 form an angle of about 80° to about 100°. The rebound slot 142 forms the retainer and, should the pull tab bounce when the lid is pried off the can, the tab will move from the finishing notch to the rebound/retainer slot 142. Additionally, it is noted that the body of the opener 130 includes a bump 144 on the top of the body and which extends above the opener's handle. This bump 144 gives the body a somewhat egg-shaped configuration. The opener can be formed without ~~with~~out the bump.

Please replace paragraph no. [0041] with the following rewritten paragraph:

[0041] The opener 150 (FIG. 11) is also a single port opener, generally similar to the opener 130 (FIG. 10). However, in the opener 150, the channel 152 slopes

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rearwardly more than does the channel 136. Thus, where the channel 136 (FIG. 10) forms an angle of about 10° to about 20° with the vertical axis VA of the opener 130, the channel 156 152 forms an angle of about 40° to about 50° with the vertical axis VA of the opener 150. Additionally, the finishing notch 154 slopes more forwardly of the channel 152 (rather than being generally vertical), and the rebound/retainer slot 156 forms an obtuse, rather than an acute, angle with the channel 152. In view of the change of orientation of the channel, the finishing notch and the rebound slot, the finishing slot and rebound notch define an angle of between about 150° and 160°. It will also be noted that the back edge 158 of the body is generally concave from the handle to the bottom of the body. This shape to the back edge of the body forms a seat for the user's hand when the handle is gripped from below, rather than from above.